If Venture Capital Falters, Will Job Creation Fade?

By Christopher DiGiorgio and Jeanne G. Harris
Research report
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Companies backed by venture capital have been a major source of technological innovation, economic growth and job creation over the last 40 years. But the venture capital industry is at a crossroads as it faces unprecedented competition and changing market dynamics. Ten recommendations from Silicon Valley can help the VC industry adapt and keep technology innovation and job creation flourishing.

### Research methodology

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<th>Methodology</th>
<th>Description</th>
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<tr>
<td>NVCA roundtables</td>
<td>Facilitated 5 NVCA roundtable discussions in San Francisco, Silicon Valley, Washington DC, Boston and New York attended by 60 VC and industry experts on the challenges and opportunities facing the VC industry.</td>
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<td>Subject matter expert interviews</td>
<td>Conducted 35 additional interviews with academicians, economists, industry observers and other subject matter experts.</td>
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<td>Technology culture survey</td>
<td>Probed Silicon Valley's cultured characteristics in a survey of more than 600 full-time IT professionals; roughly half were based in Silicon Valley, the other half were scattered throughout the United States.</td>
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<td>Entrepreneur roundtable</td>
<td>9 CEO entrepreneurs participated in a roundtable discussion on technological innovation, entrepreneurship and supporting ecosystem.</td>
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Venture-capital backed start-ups have been a major force for technological innovation and industry disruption over the last 40 years. Without VCs, we wouldn't have Apple, Google, Intel, Microsoft, Genentech or Oracle. But the world of venture capital is changing, and rapidly. Those that consider them "vultures" might cheer, but that shift is putting corporate innovation and job creation at risk.

The Accenture Institute for High Performance recently conducted a study to understand the changing dynamics of the venture capital industry and its implications. We found persuasive evidence that venture capital has been the most efficient mechanism for transforming entrepreneurs' ideas into large successful businesses. Venture capital is one of the critical elements of the Silicon Valley ecosystem, helping transform startup ideas into successful businesses. (See figure 1, “Silicon Valley Technology Innovation Ecosystem.”)

A good VC firm brings more than just cash to a startup. Above all, it offers unique expertise to assess the viability and potential of a new startup. “Sometimes there is a thin line between an entrepreneur and a dreamer” explained Jeff Berry, a 30-year veteran of corporate ventures. “The art of being a VC is to distinguish the brilliant innovation from the crazy ideas.”

Figure 1: The Silicon Valley ecosystem of technological innovation and entrepreneurship

Silicon Valley Tech Innovation Ecosystem
Silicon Valley's greatest innovation – how companies evolve from ideas to successful enterprises

Appealing climate to live and work
- Great weather
- Desirable metropolis
- World class recreation
- Tech savvy culture
- Diversity
- Tolerance

Financial exits
- IPO
- M&A

Figure 1 summary: The innovation pool is rich with startup nutrients
- University basic research
- National labs
- Corporate lab
- Accelerators
- Incubators

The innovation pool is fed by startups
- 20k startup ideas get seed money each year
- Only 10% (or 2000) of funded ideas make it to growth stage (beyond ‘seed money’ round)

Market validation as a sustainable business
- Large pool of highly skilled workers
- Engineers
- Developers
- Sales
- Manufacturing
- IT
- Admin

Successful businesses look to reinvest in the system
- 6-7 years

Failure. Many businesses do not make it, and will pivot back into the mix.
- Investor forgiveness not found elsewhere around the world

Reinvestment waterfall
- Many winners. A successful IPO / M&A also creates success for many others: investors, venture capitalists, employees etc.

Recycle:
- Experiences
- Talent
- Ideas

Large base of early corporate adopters

Corporate success
- National labs
- Corporate labs

Entrepreneurship
- Experienced
- International
- Optimistic
- Multi-disciplinary

Mentors
- Angels

Legal/IP
- Peer networks

Accounting
- IT

Banks

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VCs contribute a ready-made ecosystem of talent, alliances and expertise for converting an idea into a viable business plan, and then launching and scaling a business to prepare it for an initial public offering—a collection of characteristics and skills known in the industry as “adult supervision.” VCs have connections that open doors to potential customers, and their commitment signals that a startup is a serious business with significant market potential. (See figure 2, “The value of venture capital firms.”) The best VCs are fully committed to their startups for the long term. Much like farmers, good VCs tend to the most promising young sprouts, dispassionately weeding as needed, until they are ready for harvest.

VCs historically are among the most efficient creators of tech innovation and job growth. Venture capital represents only 0.5 percent of total US R&D investment. But over the last 40 years, venture-backed companies produced $3 trillion in annual revenues, 21 percent of US GDP and 11 percent of the private-sector jobs.1 VC-backed companies form the backbone of entire industries. (See figure 3, “The economic impact of VCs.”) And the high-tech jobs created by startups are well paid: technology employees earn a 17 percent wage premium (even accounting for education and geography) over other jobs. What’s more, for each new high-tech employee in the US, four to five non-tech jobs are created. That multiplier effect can lift the entire economy of a region.

Figure 2: Value of venture capital firms
A good VC brings much more than money to the table. In fact, its contributions of connections, expertise and talent are just as critical as funding to the long-term success of any new venture.

Figure 3: Economic Impact of Venture Capital by Industry Sector, 2012
VCs have helped create businesses worth billions of dollars, employing millions of people—especially in the world of high-tech. In the future, VCs will want to broaden their impact by seeking out new industries for investment.

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<th>Percent of VC-backed jobs in major industry sectors</th>
<th>Percent of VC-backed revenue in major industry sectors</th>
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<tr>
<td>Software (734,064 VC-backed jobs) 90%</td>
<td>Semiconductors / Electronics ($234.4 million VC-backed revenue) 88%</td>
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<tr>
<td>Biotechnology (427,353 VC-backed jobs) 74%</td>
<td>Biotechnology ($161.6 million VC-backed revenue) 80%</td>
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<tr>
<td>Semiconductors / Electronics (620,773 VC-backed jobs) 72%</td>
<td>Computers ($402.3 million VC-backed revenue) 46%</td>
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<td>Computers (1,179,287 VC-backed jobs) 54%</td>
<td>Software ($226.5 million VC-backed revenue) 40%</td>
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<tr>
<td>Telecom (445,596 VC-backed jobs) 48%</td>
<td>IT services ($22.5 million VC-backed revenue) 39%</td>
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Source: National Venture Capital Association and IHS Global Insight. Venture Impact: The Economic Importance of Venture Backed Companies to the U.S. Economy, 2012

1 National Venture Capital Association and IHS Global Insight. Venture Impact: The Economic Importance of Venture Backed Companies to the U.S. Economy, 2012
Are venture capital's best days behind it?

But our research found that venture capitalists are struggling with changing market dynamics. Their problems could have significant implications for the global economy and job creation. Venture capitalists are well aware of this and can quickly tick off the top challenges to their industry. Five problems stand out.

**Disappointing VC performance.** Despite their high-risk, high-reward strategy, VC’s failed to outperform the stock market over the last decade. For the first time, even name-brand firms failed to return their investors’ capital, much less return a profit. And that lack of performance is making the limited partners (the pension funds, university endowments and wealthy investors who provide their capital) think twice about funding new ventures.

Limited partner (LP) dissatisfaction with VC performance is exacerbated by a fundamental disconnect between their performance objectives and time horizons. VCs, LP investors and entrepreneurs were originally aligned around a common exit strategy and an 8-10 year horizon for the anticipated payoff.

VC’s continue to be measured on the overall fund performance over the fund’s life, a decade or longer. Traditional long-term performance metrics give VCs the incentive to keep early valuations of new ventures on the lower side—doing so makes subsequent investment rounds less expensive and allows them to manage expectations in case of a wipeout. However, LP managers are now evaluated annually, which leads them to push for higher early valuations (to indicate a greater potential payoff earlier in the cycle) and quick exits (to cut short-term losses).

**More funding and advisory alternatives.** Startups are less dependent today on VCs for capital and start-up advice. Declining technology costs and innovations (such as open-source software, offshore software development and cloud computing) make it easier for start-ups to get rolling without investing in costly infrastructure. (See figure 4, "The shifting frontier in demand for venture capital.")

**Figure 4: The shifting frontier in demand for venture capital**

Since 2000, the threshold at which start-ups need VC funding has shifted. Today, entrepreneurs can increasingly take advantage of technology (such as the cloud and the smartphone) to develop and deliver products to customers with much lower costs than they could in the past. Thus significantly fewer new companies lie outside the frontier for which VC investments are critical.
At the same time, alternative investment sources are proliferating. These include angels, corporate investors and entrepreneurs bootstrapping themselves through friends, family and even crowd-sourcing. Angels and incubators have existed for a long time, but there has been a substantive shift to angels for early-stage funding. And entrepreneurs can get expertise and mentoring for a set fee or in exchange for a small piece of the action, sometimes from investors known as “equity angels” or “karma angels.” These alternatives appeal to entrepreneurs concerned that some VCs are more interested in a fast, profitable exit strategy than helping them grow a sustainable business.

But companies that rely exclusively on alternative funding face greater risks, are slower to scale and have a lower probability of success. They carry the presumption that entrepreneurs know what advice and expertise they need—and that’s rarely the case. Few people possess both the requisite tech smarts and business smarts. Very few angels ever get a company to IPO or corporate acquisitions or other exits without the involvement of VCs.

Plateauing growth of innovative startups. To generate more successful companies and meet the high expectations of the endowment and pension funds that invest in them, more great startup ideas, entrepreneurs and investors are needed. Yet the pool of potential investment-grade startup ideas has remained relatively static at about 1500 to 2000 per year.

One reason: Few truly game-changing technologies like the Internet have appeared on the horizon to enable new business models and radically expand the opportunities for startups. Further, federal R&D spending, a critical fuel for technological innovation in the past, is also down from previous eras. Finally, too many tech startups are content to create features for a larger tech company’s suite of services rather than nurture a scalable, independent business.

Declining IPOs. According to numerous VC’s, the IPO process is broken, or at least under severe duress. A lot of good companies don’t make it to IPO anymore. In the 1990s, there were 140 IPOs per year; in 2012, there were one-third that number. Why are fewer companies getting to IPO? One reason: the bar is much higher. Companies used to IPO with revenues of $20 million; now a viable IPO needs to be over $50 million because of market expectations and the cost of regulatory compliance. Over 80 percent of successful start-ups choose to be acquired rather than face the high hurdles of a lengthy and an uncertain IPO. But the VCs (and their backers) make their best returns in the open market. More significantly, acquisitions deny the public the opportunity to derive benefits from a company just as it is ready to flourish. And fully 92 percent of new jobs are created after the IPO.

Fewer actively investing VCs. There are far fewer VCs than in the dotcom bubble era a decade ago—although as Diana Frazier, head of FLAG Capital’s venture capital strategy, points out, “That is a good thing for an industry that has suffered from excess VC capacity for much of the last decade.” The remaining VC funds have plenty of cash to invest, as levels are at an all-time high. But according to FLAG research, only 19 percent of the active VC funds are currently investing in new companies. And since fewer investments are concentrated in a relatively small number of startups, VCs anticipate a decline in the rate of new company formation and job creation over the next several years. This is already happening in non-IT sectors such as health care and energy.
What must change to keep job creation flowing?

For venture capital to continue to provide broad economic benefits, it must evolve. Here are five things our research found that VCs must do to turbo-boost the innovation, wealth and job creation engine.

1. Take their heads out of the Sand (Hill Road). The clubby world of the VCs historically consists of firms whose investors have similar backgrounds and values (often engineers with Harvard and Stanford MBAs) who tend to socialize, invest and work closely together. The most active VC investors in tech startups are located minutes apart from one another on Sand Hill Road in Menlo Park (now the most expensive commercial real estate in North America) and regularly exchange ideas. While VCs do invest in ventures beyond the Bay area, they often recommend that entrepreneurs relocate because they like their venture CEOs to live less than an hour’s drive from their Sand Hill Road offices and the rest of the technology innovation ecosystem. So similar are the VCs that entrepreneurs joke that it is hard to tell them apart. As one entrepreneur quipped, “VC diversity is limited to what color Tesla they drive.”

As much as they pride themselves on their independence and judgment, VC insularity and consensus thinking leads to tunnel vision, with all but the most independent-minded investing in the same sectors and the same companies. Entrepreneurs find, to quote one company leader who has been through the process, that “It’s always easier to convince a VC you have a good idea and to jump in when others are investing already.”

VCs with more diverse backgrounds, geography and investment strategies would introduce more countercyclical investors and potentially accelerate technological innovation beyond the currently fashionable four areas of consumer tech, corporate IT, clean tech and bioscience.

2. Adapt to the new funding reality.
As angels, corporations, crowd-sourcing sites and investment bankers encroach upon their traditional turf, VC firms must adapt. Major VC firms are already diversifying beyond pure venture investments into growth equity (expansion capital for existing businesses) and private equity. Deals where both angels and VCs invest are becoming more common. Rather than view angels and other alternative funding mechanisms as competitive threats, VCs should embrace new ways to create value. If angels or incubators provide first-stage funding to entrepreneurs, VCs can wait and see which ones show the greatest potential, and then step in where their strengths really come into play: scaling ideas into businesses ready to IPO. (See figure 5, “Competitive pressures on the venture capital industry.”)

Figure 5: Competitive pressures on the venture capital industry

For venture capital firms, investing early is critical. A $2 million investment at the outset of a venture typically buys a 20 percent stake in the company—and may bring returns on investment, over 8 years or more, of up to 20 times that investment. When VCs do not invest until later in the lifecycle, their risk is lower, but their stake and expected returns are also much lower, making the prospect less attractive to their investors. Since 2000, alternative sources of funding have made it more difficult for VCs to attract early investment opportunities from start-ups. The diagram shows how alternative funding sources are encroaching upon the VC’s traditional turf.
3. Step up investment diversification efforts: The VC community must also redouble their efforts to seek out promising business ideas outside the Valley and expand their net to include other industries and geographies. There’s been progress on this front, as some VCs have sought out entrepreneurs globally, including in India and China, but more needs to be done. And while many VCs and angels exist beyond of Silicon Valley, few have established a sustained track record of success.

4. Create new exit strategies: Perhaps the greatest challenge facing the VC industry is to institutionalize alternative exit strategies for new businesses, known in the industry as “manufactured liquidity.” With 70 percent of funds now exceeding 13 years in duration, the harvesting of the investment and more importantly the reinvestment in new ventures is often delayed, thus slowing innovation, reducing returns to investors and ultimately limiting job creation.

To address this challenge, alternative exit options in addition to acquisitions or IPOs are starting to evolve. Diana Frazier explains that “manufactured liquidity ensures that precious resources contributed by VCs, limited partners, and entrepreneurs can be better spent elsewhere.” By selling some or all of the company to other financial institutions, VCs can free up capital for investing in the next wave of innovation as well as provide a better financial return to the entrepreneur. While there have been a number of small-scale attempts to manufacture liquidity, few have succeeded and none have had a material impact on fund outcomes. If the days of the six- to eight-year path to IPO are gone forever, the industry must figure out how to manufacture alternative liquidity paths at scale other than corporate acquisitions.

5. Recommit to venturing. “VCs make their best contributions when we partner closely with our entrepreneurs,” notes Ray Rothrock, who formerly was managing director of Venrock and chair of the National Venture Capital Association. “We get our hands dirty and get more active participation in our startups.”

But Gregory Ness, vice president for marketing for startup CloudVelocity and a veteran of seven successful startups, observes that not all VCs share a passion for new ideas and building a business. “Some VCs today are simply powered by hubris. But a great VC is as curious about my startup as they are knowledgeable about their own business.”

More VCs today are evolving to become a full-service source of capital, talent, sponsorship and strategic advice. Yogen Kapadia, CEO of document management and data compliance startup Infinote, agrees: “I did not need a VC to build my product, but when it comes to building a business, you really need the money and the expertise a VC provides. It adds a lot of credibility when I tell prospective enterprise customers that we are funded and backed by a good VC.”

The public role in creating jobs

Some necessary changes, however, are beyond VC control. The government needs to reward risk taking in education, science and business, according to many venture capitalists. Those we spoke with in Silicon Valley urged public-sector attention to increase the pipeline of quality startup ideas, especially in five areas.

1. Education: Educators must retool their learning objectives and commit to inculcating a new generation of pragmatic, innovative problem solvers. That means instilling creative problem solving, idea creation, resilience and entrepreneurial skills in students starting as early as elementary school. High school students need opportunities to learn basic business principles and economic literacy. And (perhaps toughest of all) students, parents and educators must embrace the Silicon Valley-based cultural concept that failure is a critical element of the innovation process, because we learn more from our failures than our successes.

At the university level, institutions are starting to find new ways to reward risk taking and support entrepreneurs even before they graduate. For example, the University of California UC Berkeley Startup Accelerator (UCBSA) helps current students and recent grads develop and
prototype their business ideas. And since fledgling entrepreneurs hesitate to risk a business startup if they are saddled with massive student loans, universities are exploring ways to help them find financing or reduce their debt. (One idea: University-sponsored entrepreneur contests where the winners get their student debt forgiven).

2. **R&D investment:** Government investment in basic R&D has fueled technological innovation for decades. DARPA was the defense-funded project that eventually produced the Internet. More recently, government-supported research in the Internet and the human genome have spawned the creation of entirely new industries and business models, not just new companies. Government must find innovative ways to broaden and accelerate the process of transforming government-sponsored research into viable commercial practice.

3. **Immigration policy:** Venture capitalists are convinced that government plays a vital role in attracting global entrepreneurs and tech innovators by encouraging tech and entrepreneurial talent to visit, study, work and remain as immigrants. As VC John Doerr famously proposed in 2008: “I would staple a green card to the diploma of anyone that graduates with a degree in the physical sciences or engineering in the US.”

4. **Early adopters:** While government agencies must be careful stewards of taxpayer dollars, in the right circumstances government agencies can be important first customers for carefully vetted startup technology and innovative capabilities. For example, a satisfied government customer helped Oracle establish market credibility when it first went to market with its database product. Successfully serving government agencies provides young companies with valuable experience and references that open doors for sales in the private sector.

5. **Transparency, taxation and regulation:** Governments can also make it easier for entrepreneurs to succeed. They can simplify the task of starting up a new business, ease regulations affecting IPOs, increase R&D tax credits and remove tax disincentives to take risks by maintaining long-term capital gains treatment for investors in risky businesses.

All oars in the water

The high-stakes business of investing in technology startups isn’t for everyone; it requires business and tech expertise, great instincts, deep pockets, a high tolerance for risk and a willingness to invest years before seeing a (possibly) big payday. But venture capitalists must adjust to the changing realities of the market, or they may find themselves playing a diminished role. And if that happens, technological innovation and job creation are likely to suffer.

The VC industry has been navigating through rough seas since the internet bubble burst over a decade ago. The time has come for the industry to pull together and to chart a new course, one that produces stronger returns and greater economic growth. More diversity within the industry will help, as will a more diverse investment focus, among other things. And for job and wealth creation—the ultimate goals, after all—the public-sector also needs its oar in the water. Global economic growth and job creation, spurred by investment-grade ideas, depend on smoother sailing in the years to come.
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